

## REMARKS/ARGUMENTS

This Amendment is in response to the Office Action mailed September 29, 2005. In the Office Action, claims 7-8, 16-17, 22, 28 and 33 were rejected as being dependent on a rejected base claim, but these claims would be allowable if rewritten in independent form. As a result, claims 7, 16, 28 and 33 have been placed into independent form. Applicant respectfully requests the allowance of independent claims 7, 16, 28 and 33 and any claims that depend therefrom.

### *Specification*

The Abstract was objected based on certain language. Applicant has amended the Abstract and respectfully requests that the Examiner withdraw the objection to the specification.

### *Rejection Under 35 U.S.C. § 102*

Claims 1-6, 9-15, 18, 24-27, 29-32 and 34-36 were rejected under 35 U.S.C. § 102(b) as being anticipated by Kojima (U.S. Patent No. 5,659,582). Applicant respectfully submits that a *prima facie* case of anticipation has not been established. Applicant has amended claims

As the Examiner is aware, to anticipate a claim, the reference must teach every element of the claim. “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Vergegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987). “The identical invention must be shown in as complete detail as is contained in the...claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ 2d 1913, 1920 (Fed. Cir. 1989).

For instance, Kojima teaches a method that measures the input power. In contrast, the claimed invention utilizes the statistical distribution of the input signal level, in other words the envelope of the input signal. More specifically, Kojima features a comparison mechanism that is measures the input signal power in which an “upper threshold” and “lower threshold” is used to implement a dead zone to avoid responding to power fluctuation due to signal level variation. *See Col. 18, line 30 et al. of Kojima*. In contrast, the claimed invention is directed to automatic gain control through an estimating unit and operations involving the measurement of a distribution of the input signal level (envelope), which is insensitive to instantaneous signal envelope variation. In fact, the claimed invention takes advantage of this variation for characterizing the signal statistics. As a result, an Analog-to-Digital Converter (ADC) and power estimator blocks may be eliminated from circuitry, and thereby, reduce circuit complexity.

Therefore, in light of the foregoing, Applicant respectfully request withdrawal of the outstanding §102(b) rejection based on Kojima.

Claims 1, 2, 10, 11, 24, 25, 29 and 34 were rejected under 35 U.S.C. §102(b) as being anticipated by Abe (U.S. Patent No. 5,987,075). Applicant respectfully submits that a *prima facie* case of anticipation has not been established. Before the grounds for traverse are described in detail, a brief description of the cited reference may be appropriate.

Abe teaches two approaches for obtaining an estimate for the input signal strength. One approach is based on utilizing the recovered baseband information. *See Col. 13 lines 25-30, Col. 15 lines 25-30, and Col 17. lines 5-10 of Abe.* The second approach is based on I and Q baseband signals right before demodulator (Col. 22 lines 10-65, see Figures 13, 14 and 15). In the following, we describe that our technique is fundamentally different form both above-mentioned approaches proposed in Abe.

First, in general, an embodiment of the claimed invention may be illustrated as shown in Figure 1.

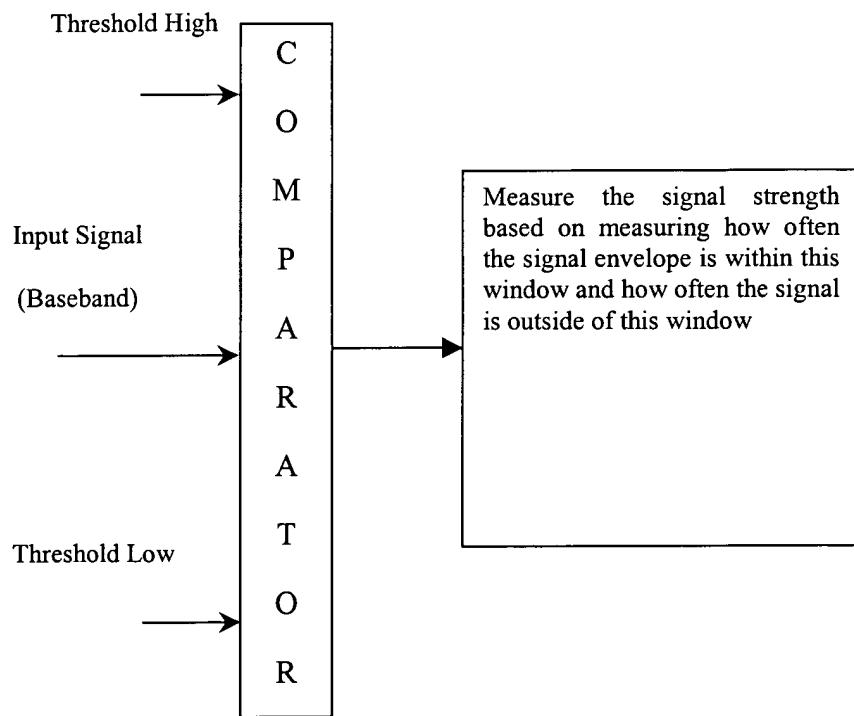


Figure 1. General illustration of invention as claimed

In the claimed invention, measurements are made with respect to the strength of the signal by comparing the signal envelope with two thresholds. According to one embodiment, the number of times that the signal envelope are placed within and out side the window indicated by the two thresholds is measured. Such measurement may occur within a specific period of time. Having this statistical data, then a decision is made about the signal strength.

In general, Applicant respectfully submits that the first approach of the Abe can generally be depicted as shown in Figure 2, which uses the decoded data at the output of the demodulator or in some of their implementation even they use the error correction data to find out about the signal strength. *See Figures 2-9 of Abe.*

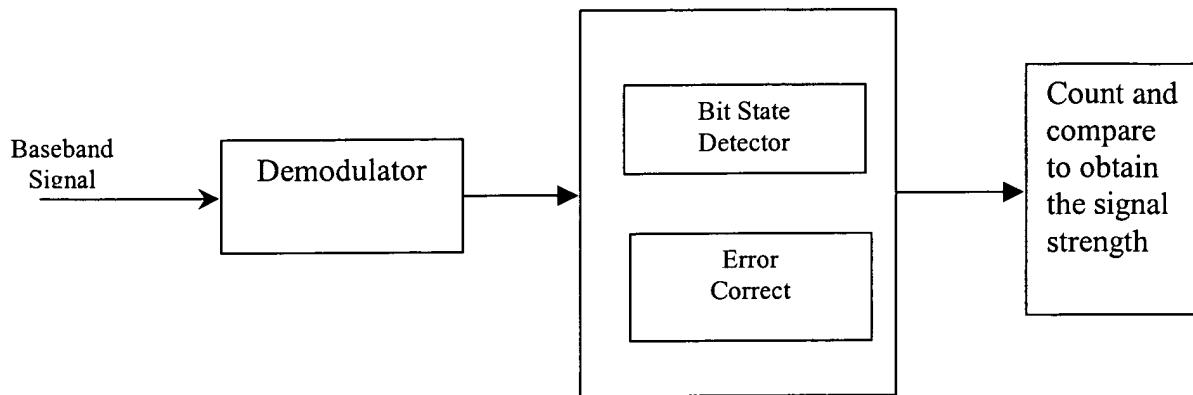


Figure 2. General illustration of the first approach of Abe

In general, Applicant points out that the second approach of Abe appears to be depicted in Figure 3, where the I and Q signals as well as an amplitude detector is used to obtain a measurement for the signal power. *See Figures 10,12,13 and 14 of Abe.* This approach is very similar to classical technique for signal power estimation.

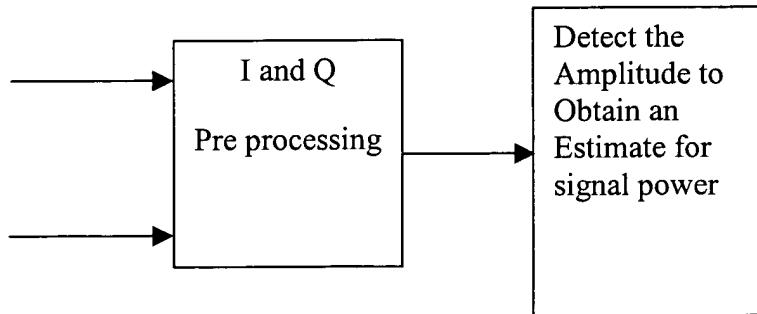


Figure 3. General illustration of the second approach of Abe

In summary, the claimed invention fundamentally different in that signal statistics are characterized by comparing the input signal level, namely the input signal envelope, with two thresholds. This statistical data is then used to estimate the signal power. There is no detection

of the signal amplitude or demodulation of the signal to obtain information about the signal strength.

***Rejection Under 35 U.S.C. § 103***

Claims 19-21 and 23 were rejected under 35 U.S.C. §103(a) as being unpatentable over Kojima in view of Scarpa (U.S. Patent No. 6,668,027). Furthermore, claims 9, 18 and 36 were rejected under 35 U.S.C. §103(a) as being unpatentable over Abe in view of Scarpa. Also, claim 23 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Abe in view of Scarpa (6,668,027) as applied to claim 19 above, and further in view of Scarpa (5,563,916). Applicant respectfully submits that a *prima facie* case of obviousness has not been established based on the arguments and amendments set forth above. Applicant respectfully requests the Examiner to reconsider the outstanding §103(a) rejections and to withdraw these rejections since the cited references do not suggest each and every limitation set forth in the claims.

***Conclusion***

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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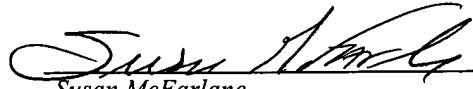
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